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## Native Mobile Ap or Mobile Web Page?

Yuxi Yang

*Purdue University, yang438@purdue.edu*

Larry theller

*Purdue University, theller@purdue.edu*

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# Native Mobile Ap or Mobile Web page?

Yuxi Yang, DURi Intern; Larry Theller, Mentor  
Agricultural and Biological Engineering Department, Purdue University

## Introduction

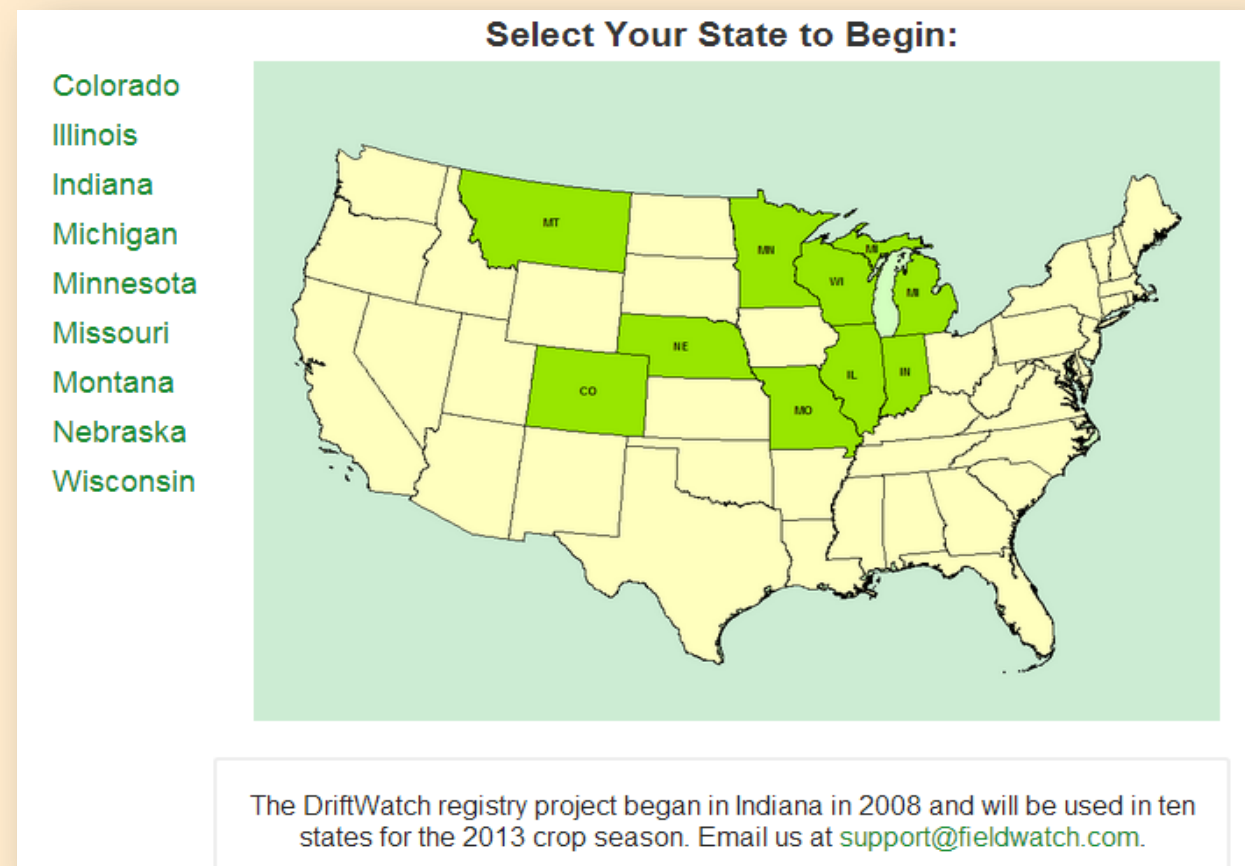


Figure I

This project is designed to greatly enhance the lines of communication between the pollinator industry and the pesticide applicator community. It builds on the DriftWatch.org Pesticide Sensitive Crop Registry ([www.driftwatch.org](http://www.driftwatch.org)), which currently covers **nine states**, with a customized map for each state (Colorado, Indiana, Illinois, Michigan, Missouri, Minnesota, Montana, Nebraska, and Wisconsin).

This project tries to provide a mobile phone-based solution app named “DriftWatch Pollinator Mapper” that will allow beekeepers, apiary inspectors, and association staff to easily register and map a hive into the Driftwatch system, where local pesticide applicators will notice it and be aware of the presence of pollinators. Through this grant-funded effort, this solution will be enabled in three of the Region 5 states.

## Methods

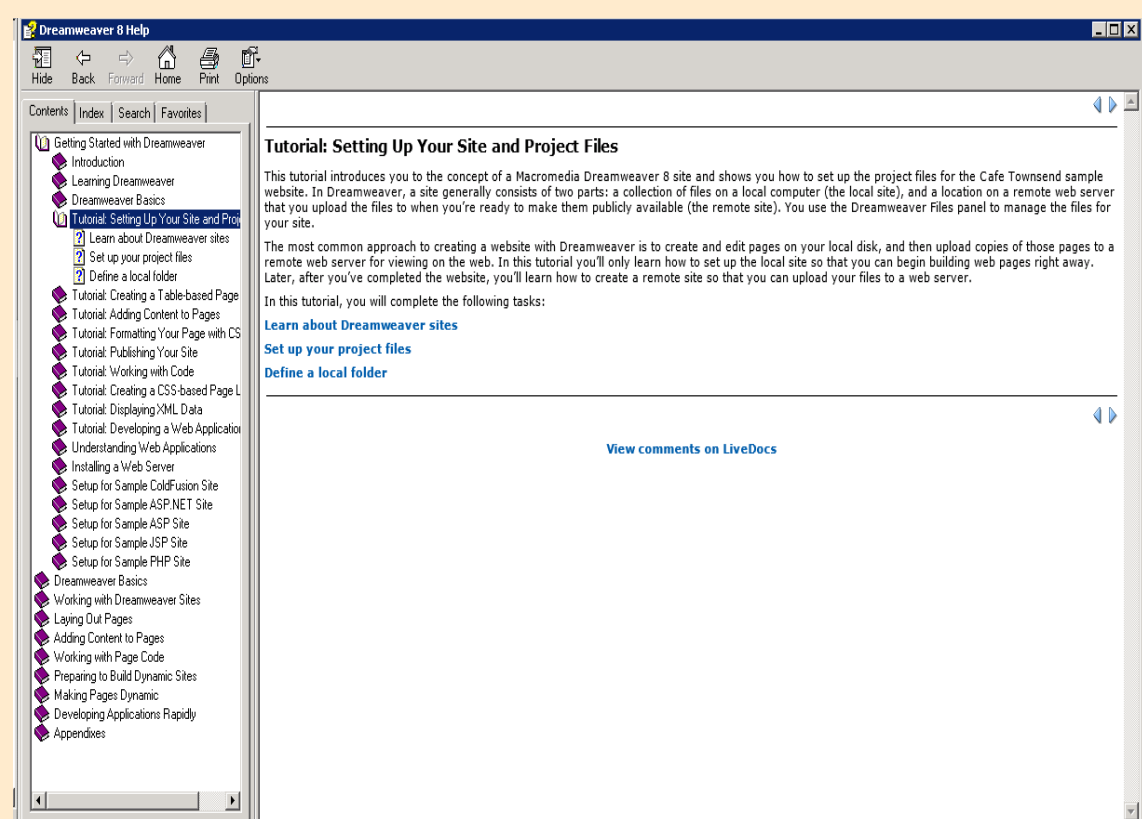


Figure III

Figure IV indicates the online materials from W3C.COM about HTML 5.0. After going through this, I am able to transform the HTML4.0 to HTML 5.0 by fixing the problems during the validation.

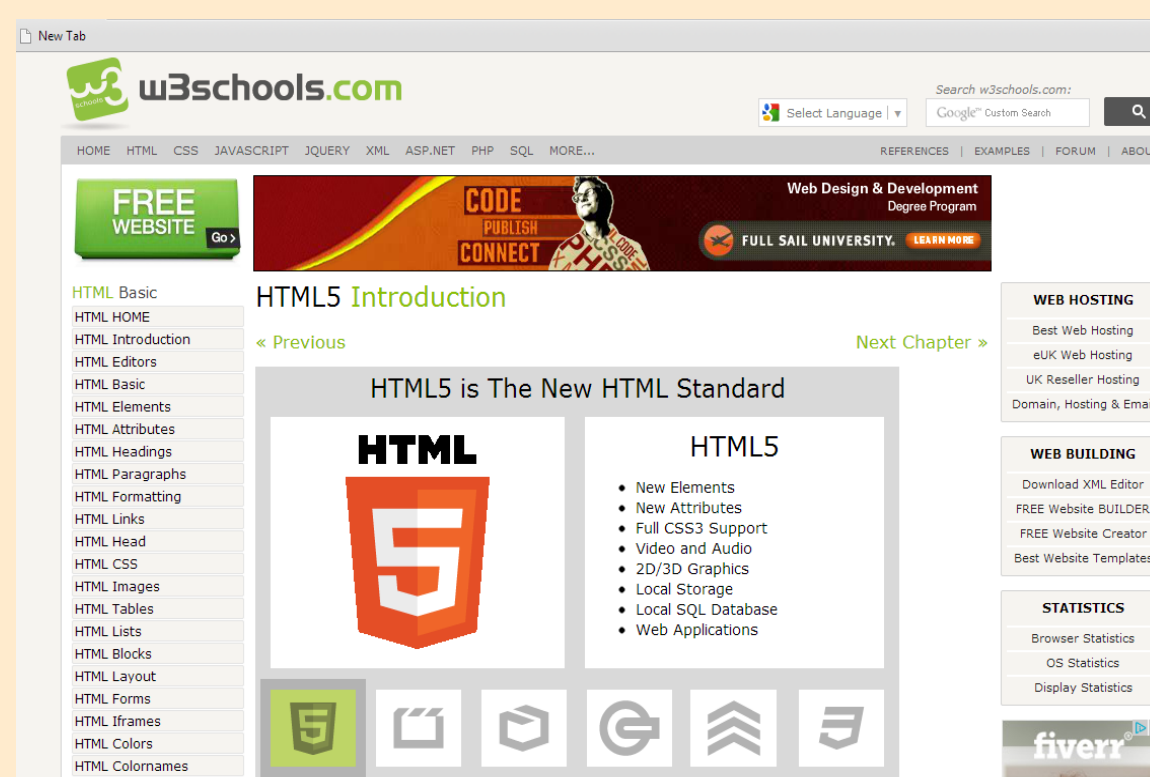


Figure IV

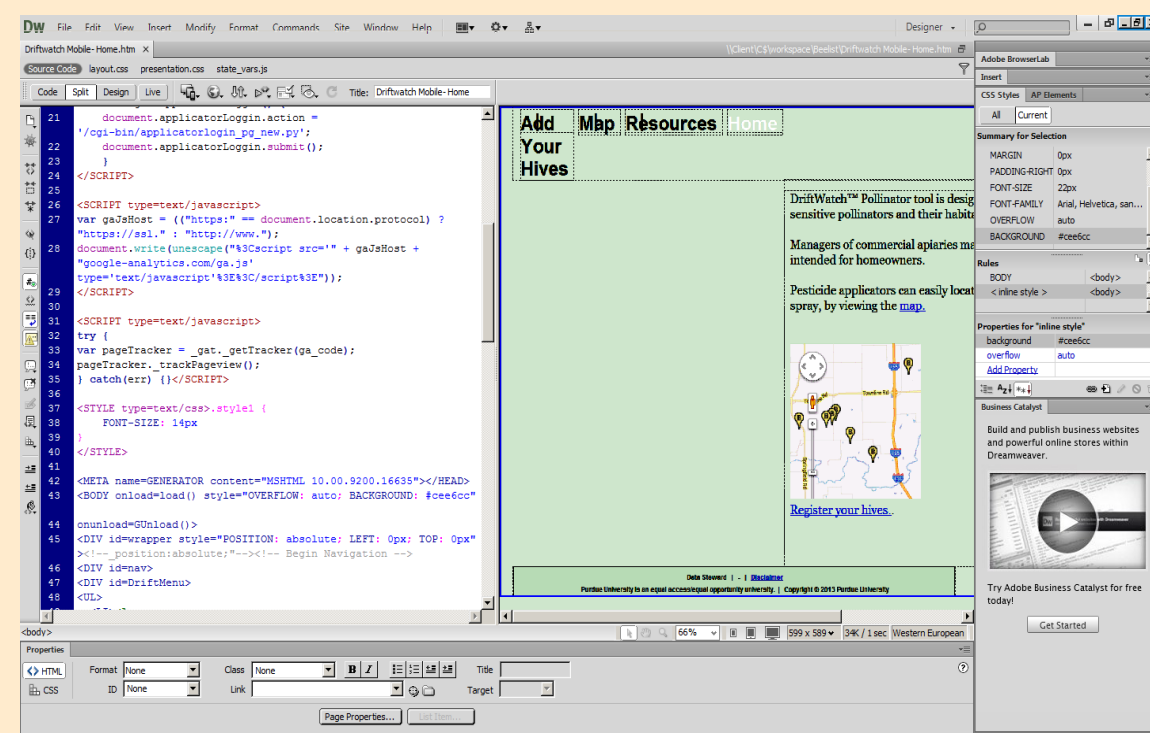


Figure V

Figure III shows the tutorials on Dreamweaver 8, which provided training about this web design tool.

Figure V explains how I modify the “bad” and “old” pages on Dreamweaver.

## Comparison

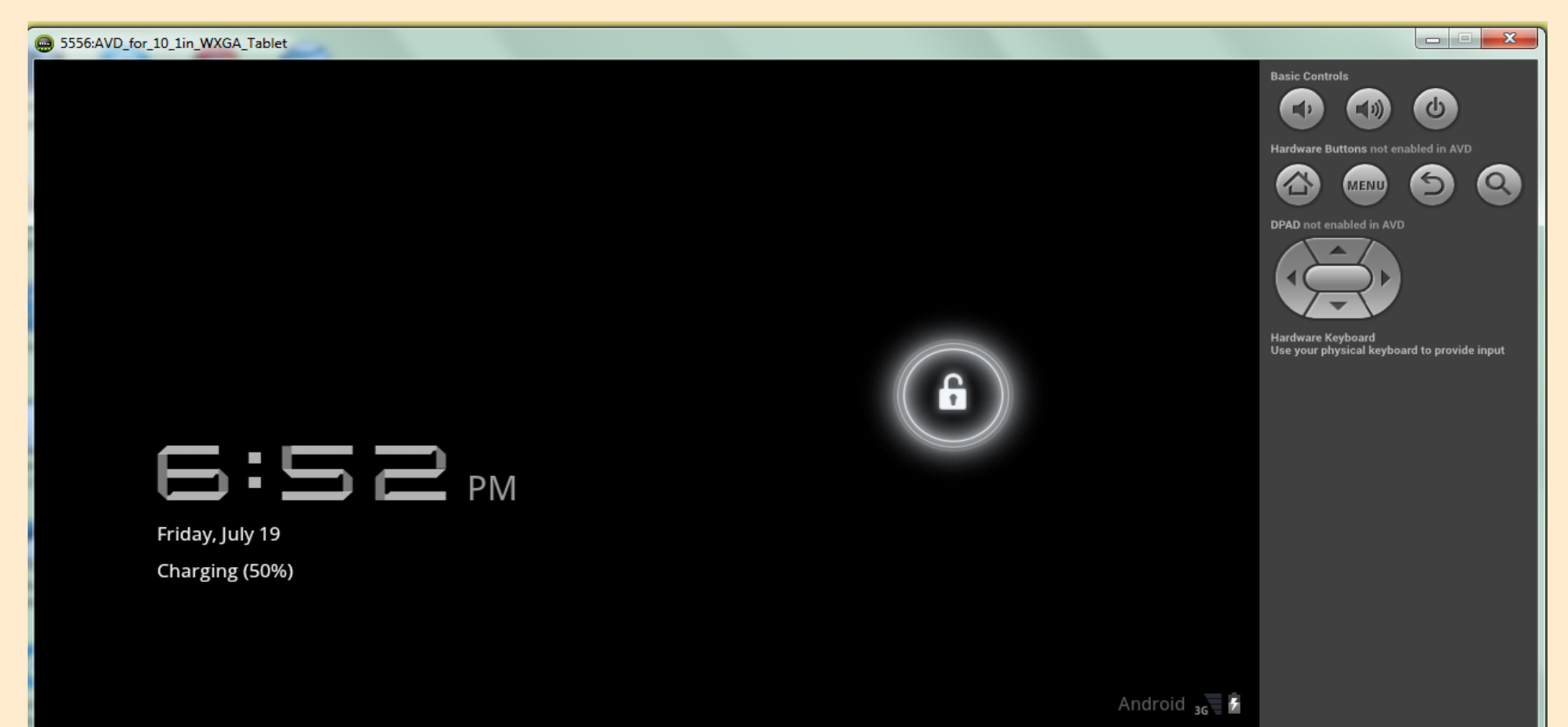


Figure VIII

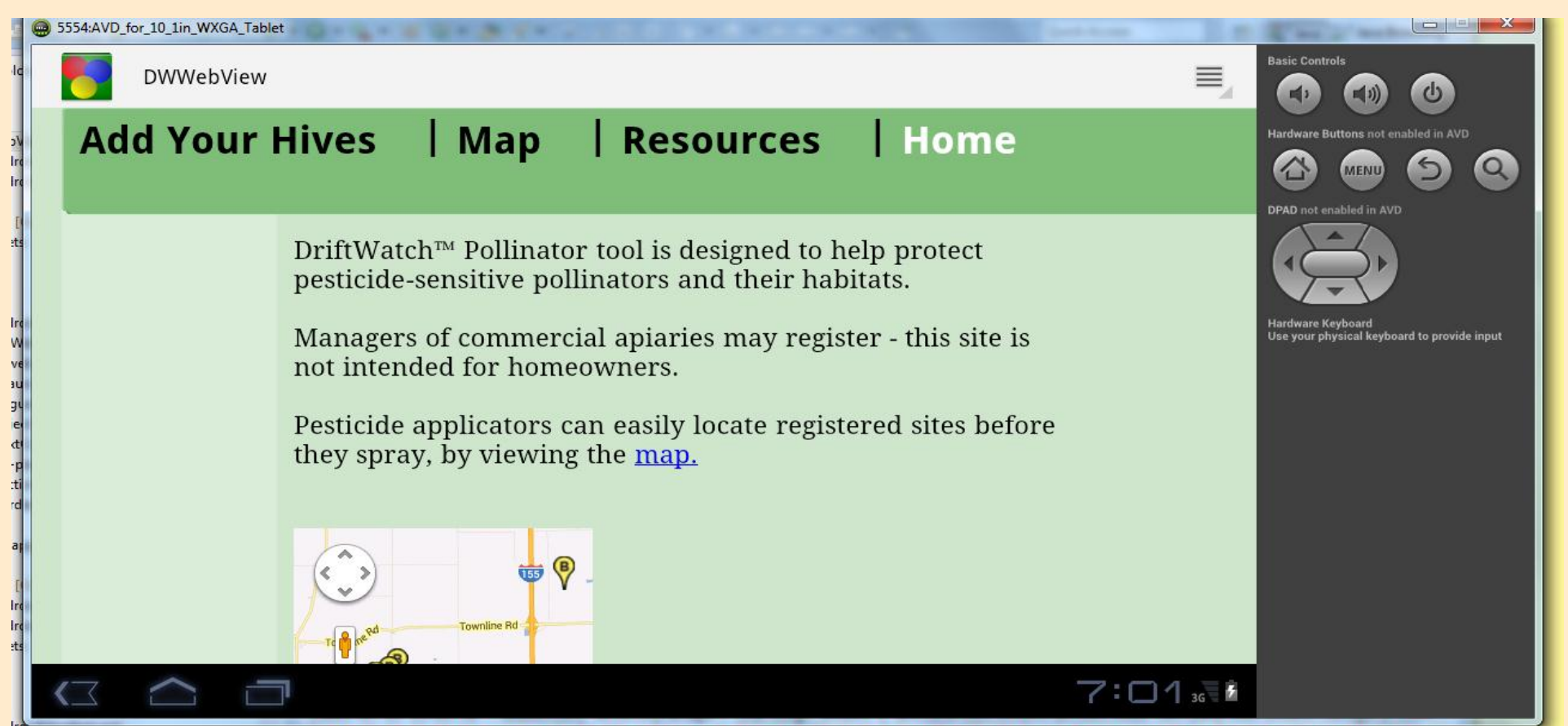


Figure IX

We used emulate to test how our App will look like on the tablet using emulation on computers in our Lab, then we tested it on hardware. Note, this is not a native Android App. Our Ap uses “webview” to present our mobile web site for the users, instead of using the public browsers. This allows changes to happen on the server, without the need to push updates. It also eliminates the complex web addresses on the bar.

## Purpose

The purpose of the application is to speed the process of registering beekeepers within DriftWatch, since many beekeepers have significant trouble using only web-based tools for registering their hive locations..



Figure II

The relationship between beekeeper totals registered on DriftWatch between Indiana (right) and Illinois (left) is shown above.

## Results



Figure VI



Figure VII

Figure VI and Figure VII are the final products that our web sites looks on the mobile tablets.

As you can see, our web sites look more continuous within the same style sheet and have more appropriate size, which is capable of matching the screen size of most of the tablets.

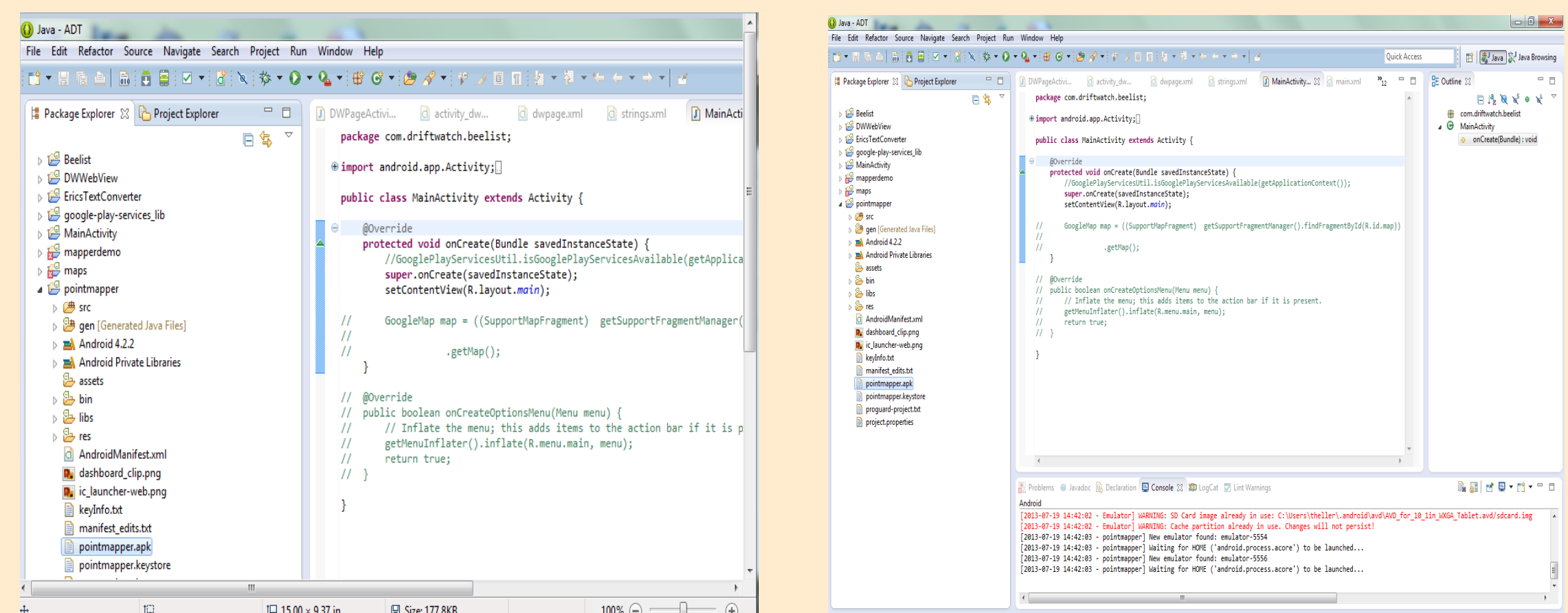


Figure X

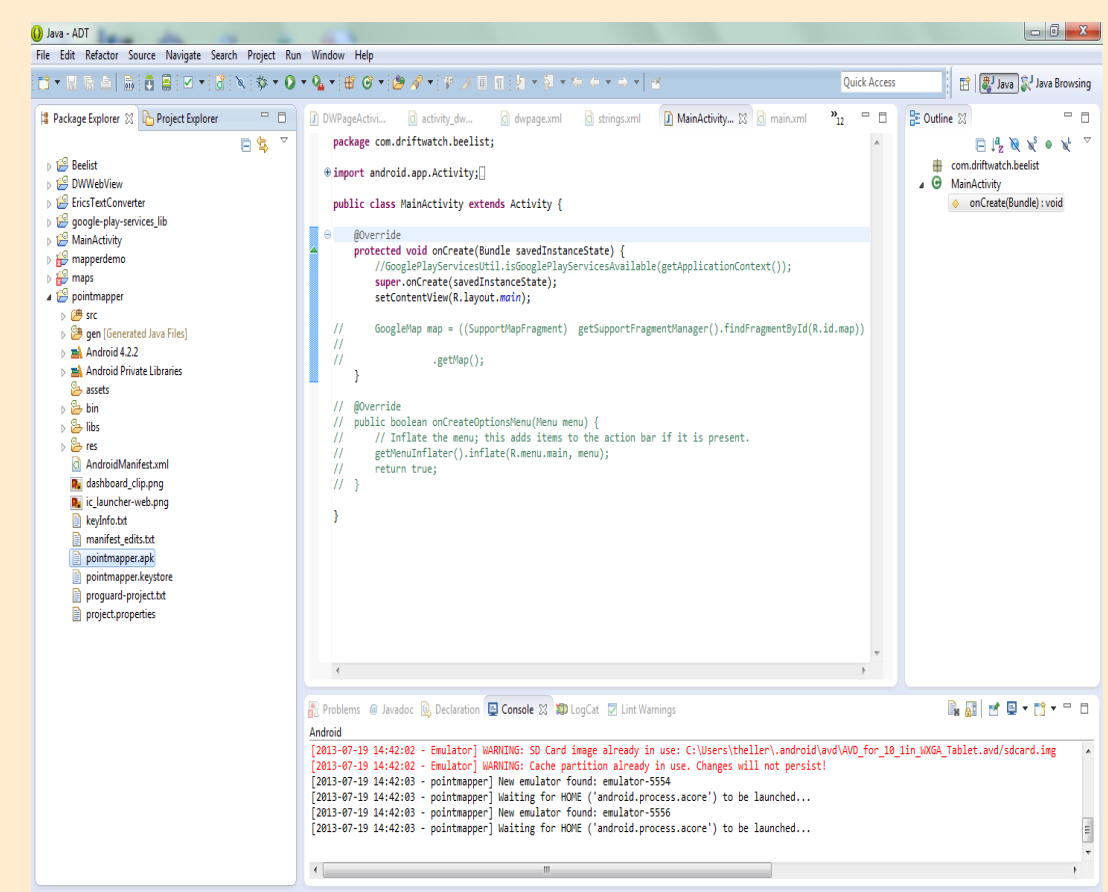


Figure XI

My teammate Shreyas Sundararaman has been working on the development of the native Android App (using JAVA and XML) for our project. Figure X and Figure XI are part of his job.

This project provides a comparison between a native Android Ap and a mobile website, both designed to do the same actions. We expect the native Ap will perform faster than the “webview” even after some tuning of the site. However native Android takes longer to construct, and every change needs to be “pushed out” to the user base; whereas the changes in a “webview” site are done in HTML 5 on a server and users can immediately see them.

My team includes Shreyas and Nick Flanagan, and is based in the Agricultural and Biological Engineering Department,. It is led by Larry Theller. This effort is part of a grant funded by the U.S. EPA.